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09/586,325	06/02/2000	Ulrich Bortfeld	252/025	6473

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EXAMINER

CRAIG, DWIN M

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/586,325

Applicant(s)

BORTFELD ET AL.

Examiner

Dwin M Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6-02-2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-14, 17-31 and 33-35 is/are rejected.
- 7) ☒ Claim(s) 9, 15, 16 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

1. Claims 1-35 have been presented for examination. Claims 1-8, 10-14, 17-22, 23-31 and 33-35 have been examined and rejected. Claims 9, 15, 16 and 32 have been objected to.

**Nonstatutory Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

2. **Claim 1** is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **Claim 1 of Application 09/586433**. Although the conflicting claims are not identical, they are not patentably distinct from each other.

2.1 For Example, **Claim 1** in **Application 09/586325** is describing a method of simulating a system with at least two components. In **Claim 1** of **Application 09/586433** the Applicant discloses a method of simulating a system with at least two components where one component is a programming model of memory and another component is a programming model of a processor.

Both **Claim 1** of **Application 09/586433** and **Claim 1** of **Application 09/586325** are directed to simulating a system design, the Examiner asserts that the only difference between the two claims is that the two components modeled in the design are a processor and a memory. It would have been obvious, to one of ordinary skill in the art, to have modeled the two components in the system as a processor and a memory.

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**Specification - Improper Incorporation by Reference**

3. The attempt to incorporate subject matter into this application by reference an applications (page 1, specification), is improper because there is insufficient identification so as to direct the Examiner or future potential readers to the referenced material. The Examiner requires this information in order to properly review Applicant's specification. Furthermore, if the current application issues as a patent before the application, Applicants will be required to physically incorporate the incorporated material into the instant specification. Please refer to section 608.01(p) which recites:

Mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. In re de Seversky, 474 F.2d 671, 177 USPQ 144 (CCPA 1973). In addition to other requirements for an application, the referencing application should include an identification of the referenced patent, application, or publication. Particular attention should be directed to specific portions of the referenced document where the subject matter being incorporated may be found. Guidelines for situations where applicant is permitted to fill in a number for Application No. \_\_\_\_\_ left blank in the application as filed can be found in In re Fouche, 439 F.2d 1237, 169 USPQ 429 (CCPA 1971) (Abandoned applications less than 20 years old can be incorporated by reference to the same extent as copending applications; both types are open to the public upon the referencing application issuing as a patent. See MPEP § 103).

The application, entitled "METHOD AND APPARATUS FOR UNIFIED SIMULATION" listed on page 1 of the specification, has not been considered by the examiner.

**REJECTIONS**

**Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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4. **Claims 17-22 and 33-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

- **Claims 17-22 and 33-35** recite a computer program product. It should be noted that code (i.e., a computer software program) does not do anything per se. Instead, it is the code stored on a computer that, *when executed*, instructs the computer to perform various functions.

The following claim is a generic example of a proper computer program product claim;

A computer program product embodied on a computer-readable medium and comprising code that, when executed, causes a computer to perform the following:

Function A

Function B

Function C, etc...

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. **Claims 1, 5, 6, 10, 17, 23, 24, 28, 29, 33 and 34 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Hollander U.S. Patent 6,182,258.**

5.1 As regards independent **Claims 1, 10, 17, 23 and 33** the *Hollander* reference discloses a simulation environment with more than one model (**Figures 1-8, Col. Col. 2 Lines 50-67. Col. 3 Lines 1-3, Col. 4 Lines 58-65**), using a high-level programming language (**Col. 1 Lines 55-61, Col. 3 Lines 18-28, Col. 4 Lines 52-58, Col. 6 Lines 40-45, Col. 7 Lines 1-11**),

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where cycle accurate information is generated (**Figure 6 Item 86, Col. 3 Lines 18-28, Col. 10 Lines 24-28**).

**5.2** As regards dependent **Claims 5, 6 and 29** the *Hollander* reference discloses clock and signal functions (**Figures 4, 6, Col. 18 Lines 38-45**).

**5.3** As regards dependent **Claims 24, 28 and 34** the *Hollander* reference discloses using a high level programming language (**Col. 1 Lines 55-61, Col. 3 Lines 18-28, Col. 4 Lines 52-58, Col. 6 Lines 40-45, Col. 7 Lines 1-11**).

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6. Claims 1, 10, 17, 23 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable in view of **Bargh et al. U.S. Patent 6,195,627** in view of **Roy et al. U.S. Patent 6,295,517**.

**6.1** As regards independent **Claims 1, 10, 17, 23 and 33** the *Bargh et al.* reference discloses simulating a system design and creating models, (**Figure 3B, 3C, 3D, 4B, 4D Item 446, 4E, Col. 2 Lines 20-31, Lines 39-49, Col. 7 Lines 60-67, Col. 8 Lines 1-15, Col. 22 Lines 52-65**), using a high level programming language (**Col. 2 Lines 64-67, Col. 3 Lines 1-40**).

However, the *Bargh et al.* reference does not expressly disclose identifying components and generating cycle accurate information.

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The *Roy et al.* reference discloses identifying components (**Col. 3 Lines 55-56, Col. 5 Lines 10-21, Col. 9 Lines 21-27**), and generating cycle accurate information (**Figures 5A, 5B, Col. 3 Lines 6-11, Col. 6 Lines 1-14, Col. 8 Lines 10-48, Col. 12 Lines 61-67, Col. 13 Lines 1-13**).

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Bargh et al.* reference with the *Roy et al.* reference because (*motivation to combine*) when designing a complete system some components will execute at different speeds than other components, as an example a processor unit will execute faster than a memory unit, due to this difference in execution speed there needs to be a mechanism to share and synchronize the operation of the different elements of the system and generating cycle information is a method of performing the function of getting all of the *clusters* of components to be simulated together, (*Roy et al. Col. 1 Lines 53-65*).

**6.2** As regards the limitation of independent **Claim 10** of a cycle based simulation environment.

The *Bargh et al.* reference does not expressly disclose a cycle based simulation environment.

The *Roy et al.* reference discloses a cycle based simulation environment (**Col. 2 Lines 38-43**).

It would have been obvious, at the time of the invention, to have combined the *Bargh et al.* reference with the *Roy et al.* reference because, (*motivation to combine*) see paragraph 5.1 above.)

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6.3 As regards the limitation of independent **Claims 17 and 33** of a computer-programming product, the *Bargh et al.* reference discloses (**Figure 2 Item 46, Figure 3C, 3D, 4C, 4D, 4E, Col. 6 Lines 55-67**).

7. **Claims 2-4, 7, 8, 11-14, 18-20, 25-27, 30 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hollander U.S. Patent 6,182,258** in view of **Malin et al U.S. Patent 5,732,192**.

7.1 As regards independent **Claims 1, 10, 17, 23 and 33** see paragraph 5.1 above.

7.2 As regards dependent **Claims 2-4, 7, 8, 11-14, 18-20, 25-27, 30 and 31** the *Hollander* reference does not expressly disclose a component management system.

The *Malin et al.* reference discloses a component management system for simulation (**Figures 1A-17**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Hollander* reference with the *Malin et al.* reference because (*motivation to combine*) the *Malin et al.* reference discloses a flexible method of generating global models that provide ease of simulation without having to have specific information about the systems being modeled and abstracted (*Malin et al. Col. 2 Lines 43-51*).

**Allowable Subject Matter**

8. **Claims 9, 15, 16, 21, 22, 32 and 35** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the



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limitations of the base claim and any intervening claims and once all other rejections/objections have been traversed.


**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M Craig whose telephone number is 703 305-7150. The examiner can normally be reached on 9:00 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703 305-9704. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

DMC  
June 29, 2003

  
HUGH JONES Ph.D.  
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